

A PRIMER ON OUTWARD BOUND THEORY

by

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Outward Bound is characterized by action, dramatic adventure, high energy, potentially strenuous activity. The physical dynamic permeates the literature, the public relations materials, the pictures used, and the films that have been made. The emphasis is on confronting physical and psychological challenge, pushing beyond previously accepted physical limits, digging within oneself for untapped reserves. The main character prototype is that of the adventurer, the physical adventurer, a prototype 3000 years old, an image of ourselves that we inherit from Homer. We follow in the footsteps of the first recorded adventurer and traveller, Odysseus. In a very direct way we seek to re-enact the moral equivalent of the Odyssey, leaving the comforts of home and civilization, and our loved ones behind, and striking out into the unknown, seeking to push back the physical geographical frontiers of our existence, and in the process probing the myths, and the monsters of our own mental and psychological being. Like Odysseus we face the hazards of the strange, the mysterious and the unknown, struggle through hardships of shipwreck, storm and the vagaries of nature, challenge the monsters of this world and of our mind, overcome the discomforts of hunger, cold and the wet, and face the loss of our companions. And on our return we find the world has changed, changed by the inexorable erosion of time, but changed primarily because we have changed. Our perceptions have changed, our way of defining reality has changed. It is one of the basic assumptions of Outward Bound that if you change the world, you may or may not change people as a result; but change a person's view of the world and you have changed the world for that person.

In educational terms this is what we call growth. Let us examine the concept. What do we mean by growth? It is John Dewey that first defined the purpose of education as growth.

Growth takes place at three levels, or in three different ways, Paul Harmon suggests in his earlier paper on Outward Bound. Drawing from Blum's Taxonomy he points out that a student develops in three dimensions: the psychomotor (physical, skills, strength, etc.); the affective (values, feelings, interpersonal awareness, etc.); and the cognitive (tracks, ideas, knowledge). Mind, Body and Spirit - the trichotomy - is another concept as old as classical Greece.

Psychomotor growth is fostered through increased fitness, improved balance, the development of manipulative skills; affective growth we hypothesize takes place through the overcoming of physical stress, through the confrontation of interpersonal interaction, through what Jashminer has called "value forming experience."

Cognitive growth in Outward Bound? There is a certain amount of factual information acquired about maps, first aid, cooking, etc., but more significant are the ideas that emerge through discussion, reading, the silent contemplation of solo, and through the thoughtful, deliberative process of journal keeping. It is the articulation of the action experience through thought into words.

Some feel, and I am among them, that Outward Bound does a powerful job at the physical level, it is highly effective at the affective level, but that there are many missed opportunities for intellectual development. But this is not the point I wish to make in this paper. Rather I seek to explore a broader definition of development and growth.

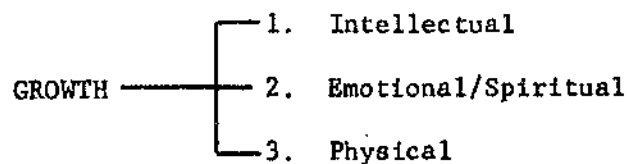
Dewey in defining the purposes of education as growth contrasted the experiential learning model to the information assimilation model. (Coleman) Education is the process of preparing the young for adult participation in society. But Dewey saw this not as some far distant goal. The best preparation for the future is full, active, and responsible participation in the here and

the now, in the present. So education is not merely acquiring facts, and warming up dead ideas of the past, but learning is the engagement in problem-solving, and with Dewey it was particularly the application of the scientific method to the problems of our day. He also saw education as a socializing process, of enhancing the interaction of people with each other and with their environment. Most of all, it involved preparing the young to handle freedom, to understand the place of discipline and self-discipline in the context of freedom, and responsible decision making within a democratic society. The important thing is that education is preparation for life which takes place through the creative interaction of the learner with others and with his environment in problem-solving situations. This is the best training for the future. Life is learning; the purpose of education is to produce life long learners.

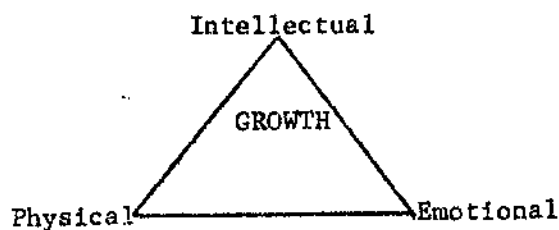
The other great experiential educator that is seminal to the Outward Bound concept is Kurt Hahn. Hahn coming from a totally different intellectual and cultural tradition arrived at many of the same conclusions. Dewey was moved by the promise of freeing mankind through the democratic process he saw at work in America. Hahn was moved by the decline of the West, the collapse of traditional society, the erosion of values and the rise of Hitler. As a Jew who was exiled from Germany, he had a deep intellectual and psychic appreciation of the thin line between civilization and barbarism. Where Dewey is brilliant, a disciplined thinker, erudite, a trained thinker in the tradition of classical philosophy, wordy, pedantic; Hahn, also brilliant, but a polemicist, an activist, "an old man in a hurry" as he described himself, projecting with a sense of urgency, drama, a prophet of promise and doom. Where Dewey evolved an intricate and systematic theory of education, as a part of a much broader literature on philosophy; education being a branch of philosophy: Hahn never developed a coherent theory of education, expounded his ideology and life view anecdotally, and through the creation of a series of practical educational models, Outward Bound being one of

these. Dewey a powerful and awesome intellectual thinker; Hahn a powerful and awesome intuitive thinker. Though Hahn's theory is incomplete, the power of his imagery and educational models has been well demonstrated (Templin and Baldwin); he enhances Dewey and deepens the practices of experiential education in a highly qualitative way through stressing individual commitment, personal integrity, and values.

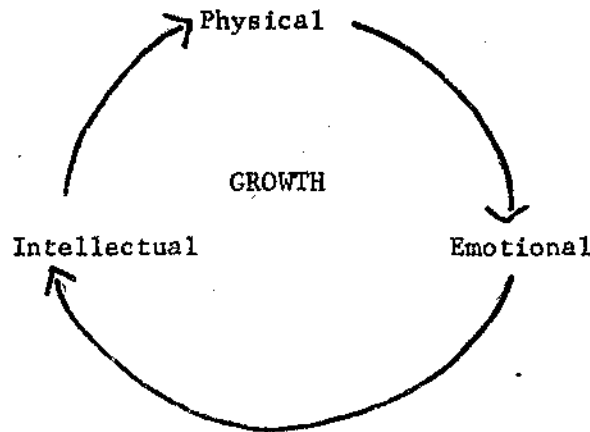
The central idea that emerges from both Hahn and Dewey then is that education is concerned with the development of a whole person, physical, emotional, and intellectual, another idea whose genesis is found in classical Greek thought. But more importantly, these dimensions are not seen as separate and isolated as has been the case in most educational systems through history, but they are integrated. There is a symbiotic interaction within and between the various dimensions of growth, the whole being greater than the sum of the parts. Growth is not just a reductionist's view of intellectual, emotional and physical development, thus:



But rather growth is a synthesis, an integration, thus:



But even the integrated triangle is inappropriate, as it denotes a static, fixed immovable quality of the pyramid's momentum, awesome, but unmoving and slowly being buried in sand. Dewey's concept of growth implies a dynamic, movement, a process, what he calls "continuity." The past feeds into the present which leads one into the future. It may be best depicted thus:



Or even better a circle stretching out three dimensionally into a spiral, or a helix, an artistic feat beyond my limited capabilities that I will spare the reader.

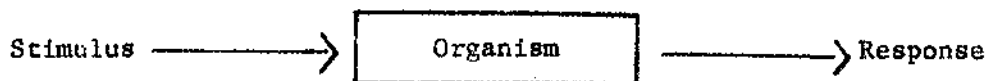
The point is that education seen as growth involves this type of integration, a unity of opposites, a total gestalt of the intellectual, the physical and the emotional/spiritual education, whole person learning which Outward Bound has the potential of being one of the powerful and compelling models.

So much for glib definitions of education as development or growth and the few simplistic illustrations. What is the basis in theory?

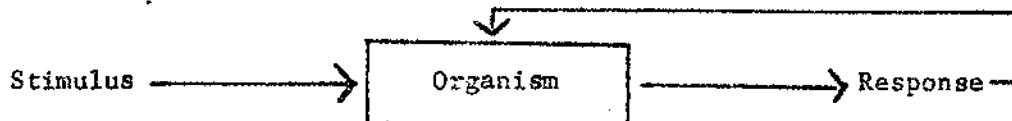
#### THEORETICAL CONSTRUCTS

There are several theoretical constructs that support the preceding view of education as growth. Appreciate that they are theoretical. We know very little about the inner workings of the mind, of how people really learn in a full sense, of the complexities of the human organism. However, the theory is useful as it does help us focus on what we are trying to do and in a tentative way helps us understand and focus our thinking on our enterprise. What follows is a very brief review of some of the thinking that is being done about thinking. How do we know? How do we learn? What are the theories of learning, the theories of knowledge (epistemology)?

The classical model of learning is derived from biology, the stimulus-response model of biological growth. Very simply, a stimulus acts upon the organism which then responds.



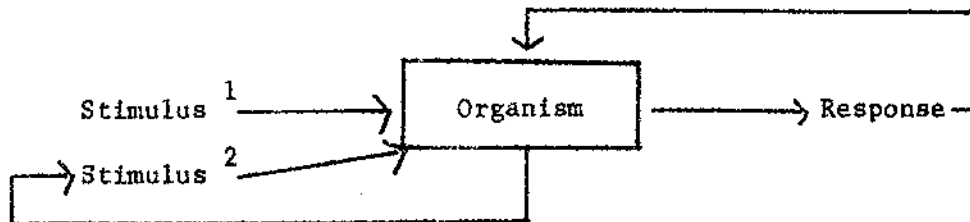
Do this often enough and the response becomes a habit, the organism itself changes as a result of this continued response; in other words, something has been learned. This can be illustrated thus:



This theory gives us a justification for drill, repetitive forms of learning, and is also the model for behavior modification, the uses of punishment and reward as a stimulus to promote learning. It is an adequate theoretical explanation for certain routine, mechanistic forms of learning. But note that the role of the organism is essentially passive, reactive, inert, waiting to be acted upon by outside stimuli. The theory denies the learner of any initiative and self assertive role.

What we might call Modified Stimulus-Response theory suggests a more active role on the part of the organism. Indeed it suggests, that far from being passive, the learning organism is assertive. It is "born curious."(Hodgkin) It actively seeks out its own stimulus; it is interactive with its environment.(Dewey) So this view of the human organism sees it as generative, assertive, uniquely programmed to learning, susceptible to being taught. And this is of its very nature inherent. These are innate, inborn characteristics. It is programmed in our genes. It is part of our human-ness. Some imply that the same concept applies to all forms of living matter, it is a part of being organic, alive, even in most primitive cellular forms. So this reaching out, this interacting, the striving for survival are seen as part of the basic make-up of the human organism; Bruner derives from that the idea that curiosity, reciprocity and mastery are inherent motivation for learning.

The Modified Stimulus-Response model looks something like this:



A more sophisticated discussion of a Modified Stimulus-Response theory is in the recent Harmon and Templin paper.

Such a psychological view of MAN-THE-LEARNING organism is essential to any positive, assertive, self-actualizing view of the human condition. It underlies the philosophic view of the responsible, adventuring, willing, optimistic, self-enhancing concept of growth found in such programs as Outward Bound.

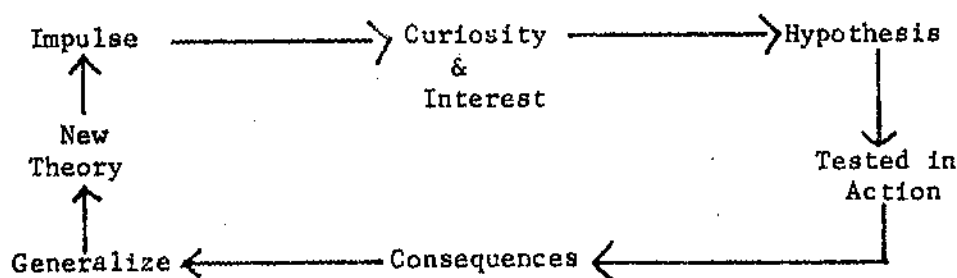
#### THEORETICAL LEARNING MODELS

Given this view of the human as a learning organism, which is widely accepted in one form or another, what then is the process of knowing? How do we learn? For the present a distinction is not made between learning and knowing. There are several theoretical models. This paper examines only three, not for the purpose of being definitive, but how the problem of knowing and learning has been approached from three widely divergent points of view. Yet there is an underlying thread of common concepts that are useful to us in attempting to analyze the learning process.

Dewey, as a philosopher, was concerned with the nature of thinking and how we think. Being a philosophic pragmatist, to him thinking was problem-solving and his theory of knowledge is approached from the prospective of how we know, combining the classical stimulus-response model with the problem-solving process of empirical science.

(1) Learning begins with an Impulse, something that is the matter, a problem that (2) arouses Curiosity and creates Interest. The implication is that Impulse is raw, impulsive, emotive, and this is transformed by the intellectual process of thinking into Curiosity which defines the Impulse and Interest which raises the question of, what should we do about it? (3) Interest generates a Hypothesis,

addressing the question of ends, what are possible solutions and means, how do we get there? (4) The Hypothesis is then tested, and alternative means may be tested. The implication is that this is an action phase of learning. Hypotheses are Tested in Action by doing. (5) As a result of testing the Hypothesis in action Consequences are produced; there are results, something has happened. (6) From this we can Generalize and (7) form New Theory which can be applied to new problems arising out of impulsive action creating a new set of interests and a new basis for hypothesis in the process of solving new problems.



This in theoretical terms is what Dewey meant by experiential learning. Curiosity and Interest, the intellectual processes, are aroused by Impulses created by problems which result in possible solutions (Hypotheses) that are then Tested in Action resulting in Consequences that are both emotive and intellectual resulting in New Theory that can then again be applied in action. So for Dewey, knowing is not merely an intellectual process, the process of thinking which is the widely accepted definition of the scholastic model of learning, it involves rather emotional stimulation, intellectual integration and practical action. It should be added that this model of knowing is not widely accepted in academic institutions.

Piaget's thinking is the most current, and the best researched from a scientific point of view. He is a developmental psychologist with a background of training in biology who did intensive longitudinal studies, that is over a 10 - 12 year period of time, of a limited number of children, mainly his own and his grand-children. The central question that Piaget focused on is how does the human being develop intelligence? His view was a developmental one from the

point of view of babies and children developing capabilities and powers of problem-solving at various ages. Piaget's research indicates there are four stages of intellectual development:

(1) The Sensori-Motor Period, during the first two years of life, when a child's learning is largely through the physical exploration of its immediate environment, grasping objects, feeling them, putting them in their mouth to taste them, hitting them, banging them. Through this process, the child very rapidly and dramatically explores the immediate world around him, the significant people, and begins to make distinctions between himself and objects of this world, establishing the "not-me-ness" of the surrounding environment.

(2) The Pre-Operational Thought Period, from 2 - 7 years of age, when language is being developed, the meaning of words being tested and explored, solving the problem of the connection between the abstraction of a word and the concrete reality of an object or a situation. Children are also capable of manipulating objects in a systematic manner, hitting a wooden nail with a wooden hammer, fitting a triangular block through a triangular hole, etc. The child can visualize shapes, forms, and objects and do various problem-solving tasks within such visualizations.

(3) The Concrete Operations Period, from ages 7 - 12 or 14, is the period of linguistic and symbolic development. Children develop language competence and the ability to manipulate mathematical symbolism and can begin to appreciate reality, emotions, concrete operations through memory and visual symbols and verbal articulation.

The fourth and final period of Piaget's intellectual development he calls

(4) The Formal Operations Period, which begins between the ages of 12 and 15, where the mind is capable of using language and mathematical symbolism to solve problems that are totally abstract, algebra as contrasted to arithmetic, the legal theory of the Constitution as contrasted to life in Colonial America. They can

begin to create and appreciate more abstract forms of music and art. This stage opens to them the broad implications and deep wealth of the intellectual and cultural tradition of a society.

Piaget's theory has largely influenced our thinking about cognitive, intellectual development. He documents that the stages are sequential and irreversible. One must begin with earlier, more primitive forms of learning as the basis for more advanced, articulate and intellectual forms of learning. There is a clear bias toward intellectual learning. He sees moral development primarily in intellectual terms as well. He does not address himself so far as I know to the emotional development of the child and early adolescent and the implications of emotional growth for intellectual growth and values. An excellent summary of Piaget can be found in the recent Harmon/Templin paper.

Polanyi says: "We know more than we can tell." He is a physicist-philosopher who approaches the question of knowing from a totally different perspective; how is new knowledge acquired and developed? What Polanyi seems to do is to take the implications of developmental growth as outlined by Piaget (though he does not draw upon Piaget for his thinking) and says that the developmental process applies to all new learning. The first stage of knowing is tacit, intuitive, playing on hunches, inarticulate. He call his book The Tacit Dimension. And the important thing is that it is in this ill defined, fanciful, even mystical dimension from which new knowledge emerges. As a scientist these are the hunches that one acts upon. This is the generative period of problem-solving when one asks the questions, fully appreciating that the nature of a question prescribes and limits the nature of the answer. Then follows a period of probing, testing, designing the experiment, finding different ways of looking at the problem, generating alternative hypotheses, a type of active exploration characterized by laboratory experimentation. The third stage represents the beginnings of discovery which many scientists speak of where images and types of visual representations begin

to emerge. One has a picture of it; there is a gestalt, the thing seems to "come together." Only in the last stage can it be reduced to words and mathematical formula and be articulated as scientific theory. The process has been described with both accuracy and a cliff hanging sense of drama in Watson's book on the discovery of DNA. So knowing in a creative sense, at least in so far as it applies to scientific discovery, involves the progression and interaction of four phases: the intuitive, one of experimentation, visual images and only finally articulation. The model has a ring of truth when applied to dramatic and creative life learning situations as well.

Hodgkin in a recent book, Born Curious, attempts to synthesize this form of thinking. Himself an educator, a teacher of teachers at Oxford, he draws upon the research and the philosophic speculation of others, particularly Bruner. There are four ways we learn, he hypothesizes: there are four ways of grasping reality: (1) the symbiotic (2) the enactive (3) the symbolic and (4) the verbal articulate. The earliest form of learning, Hodgkin argues, is symbiotic, the interaction between a learner and its tutor, the newborn child and the world's first tutor, a nursing mother. Symbiotic representations of the world continue in terms of exploring the surrounding environment in the sensori-motor terms of Piaget, in the intuitive, pre-intellectual terms of Polanyi. These relationships are expanded and enhanced through an active exploration, involving increasing physical competence and growing mastery within one's surrounding environment. In the third phase one begins to understand reality and grasp its meaning through symbolic and ritualistic identification. Finally emerges an understanding of the world and one's place in it through verbal, abstract, intellectual and articulate forms.

You know more about penguins than you probably want to know. But summarizing all of this, it has these implications for experiential education and a program model such as Outward Bound. Knowing in the traditional learning model, in formal schooling, is usually equated with information assimilation and its implications

for intellectual development. What is beginning to emerge, and it's only in an inchoate, intuitive and not particularly articulate stage, is a concept of knowing, that is not just intellectual, but is an integrative process involving intuitive hunches, placing a higher priority on asking the right question rather than finding the right answer, that includes knowing at a physical level, the sort of knowing that goes into split second timing, coordinated action of running the rapid in Hell's Half Mile, or coupling a Lunar Landing Module to a space capsule. Integrating these forms of knowing with visual thinking, the use of metaphor, as well as the verbal articulation of theoretical language and abstract mathematical formula.

#### THEORY OF INSTRUCTION

A theory of education as growth or development, Bruner has pointed out, must be based both on a theory of knowledge and a theory of instruction.

The problems of instruction, given a theory of experiential knowledge has two principle problems:

(1) that of creating learning situations that engage the learner in all four modes of learning. Assuming that we learn symbiotically, enactively, symbolically, and through verbal articulation, how do we program situations that draw upon the four modes of representation? How do we present problems, manipulate the environment, create the necessary synthesis, orchestrate the learning moment? We look for total learning to take place, whole person learning, where there is an involvement of the individual engaged in problems of the here and the now.

Another way of stating the problem is, how do we integrate the symbiotic, emotive, enactive modes of learning with the visual and verbal symbolic? Coleman has written an important article comparing experiential learning with the information assimilation model of formal schooling; the real problem we are faced with is not one of comparison, but one of integration.

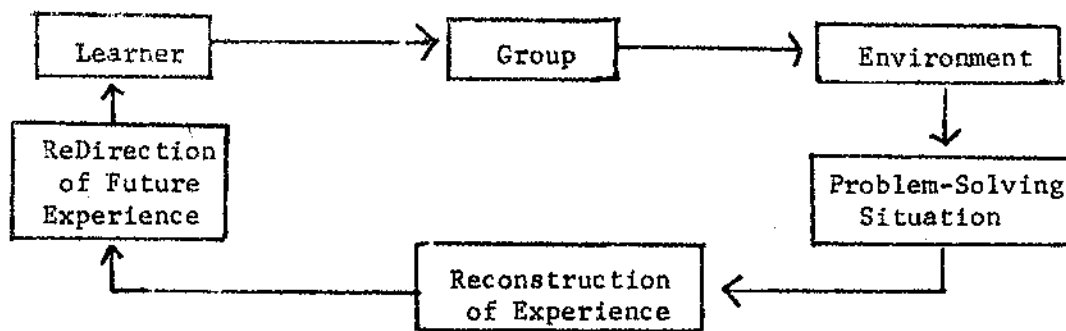
(2) The second problem, really an outgrowth of the first, has to do with motivation and transfer. The importance of the symbiotic and enactive modes of

learning in the experiential learning cycle is that they are deeply generative, motivational. It is here that the questions are asked, hunches get formulated, the building blocks of knowing begin to piece together.

This is the power of an experience such as Outward Bound, where the learner begins to ask probing questions. We see students becoming serious about themselves, their quest, deeply involved with others and engaged in the physical problems of the surrounding environment. It is a classical case of Bruner's theory inherent sources of motivation, curiosity, reciprocity and mastery, as Walsh and Golins have pointed out. The problem of traditional schooling is to draw upon the motivational power of experience, to connect with it, to relate intellectual growth with the inherent urge to curiosity, reciprocity, and mastery. Experiential education in its turn has the opposite problem. Having motivated a student, drawn upon innate, primitive and primordial emotions, how do we free the learner from the immediacy of that experience? The emotive quality of experience can be so powerful that it becomes an end in itself, a type of addiction all be it a positive one. How does climbing a mountain become a broader metaphor of climbing the mountains of the mind, or the deeper moral and intellectual abstraction of man the eternal seeker, climber, discoverer?

The experiential instructional model must achieve such an integration. It must address itself to what Bruner calls the three phases of the instructional process (1) creating the proper disposition for learning (2) structuring the learning situation and (3) reinforcement or transfer of learning. Dewey's instructional model particularly as outlined in Experience and Education is the basic construct. Dewey wrote (1) learning begins with the learner; (2) that all learning is social and involves interpersonal interaction with peers, the teacher and the community; and (3) the learning process is an interaction with the environment, via the physical surroundings of the school, the materials and information available to the student, as well as the resources of the community; (4) engaging learners in problem-solving situations. One can go back to his

theoretical learning model for his description of problem-solving followed by the Reconstruction of Experience, synthesizing, integrating, examining what has happened in an intellectual way which produces (6) a ReDirection of Future Experience. For learning to take place there must be continuity, in Dewey's theory there must be futurity. Past and present experience must affect the future for experience to be considered educative. He is very explicit that not all experiences are educative. Thus:



Walsh and Golins have done a brilliant job of applying the Dewey paradigm to the Outward Bound Process. I would only add two thoughts, the cyclical nature of the process rather than it's being a linear one. I'd also give greater emphasis to the problem of transfer, the redirection of future experience. The importance of the model is that it is integrative, it allows for the tapping of learner curiosity and interest, for the addressing of the symbiotic, social needs of the learner, the inherent motivation for reciprocity, for problem-solving situations allowing for mastery. But most important, for learning to take place in a holistic sense there must also be intellectual reconstruction, both at a metaphoric level and eventually at an articulate level. Words define us. They have implications for self concept that are important not only as a therapeutic process but as a part of our identity. Our humanness is expressed through articulation and language. Words free us from the immediacy of a specific experience. They permit us to develop flights of fantasy, only through words can we reach into the future, begin to establish some form of continuity and transfer, and connect the Outward Bound experience to a broader life learning continuum.

"Outward Bound can ignite - that is all - it is for others to keep the flame alive," Kurt Hahn wrote. As many Hahn truisms it is not true. As the Outward Bound technology and model improves and develops greater sophistication, strategies can be developed that "keep the flame alive." It can begin with an adequate theory of what we do.